Improving the availability, accessibility, and quality of prevention, treatment, and recovery services for patients with OUD is integral to combating the opioid epidemic. Access to these services has consistently been inadequate, which continues to perpetuate the epidemic and cause preventable patient morbidity and mortality [22]. To strengthen prevention, treatment, and recovery care, the curation and dissemination of best practices and integrated approaches, with guidance for how to implement, scale, and sustain these practices is needed. Such efforts should apply a health equity approach, particularly as the COVID-19 pandemic has further exacerbated challenges in accessing high quality care and has disproportionately impacted BIPOC [25]. Undeniably, data collection relevant to diverse populations suffering from OUD and SUD needs to be prioritized to better understand and respond to the needs of these patients.

Current work on OUD prevention primarily focuses on reducing opioid supply and demand. Initiatives include developing health system-wide best practices for opioid prescribing, integration of alternative methods for pain management into standards of care, and efforts to reduce adolescent exposure to opioids [19]. Although there is strong evidence that medications such as methadone, buprenorphine, and extended-release naltrexone should be the central component in the treatment of OUD, many patients are unable to access these therapies and high quality individualized care [18]. Thus, recent research has investigated strategies to overcome OUD treatment barriers, including institutional policies, interpersonal stigma, and financial constraints, among others [15], and to develop best practices for treatment of subpopulations in order to maintain long-term recovery [12].

Despite progress, further research is still needed to assess remaining gaps across the continuum of care, as well as to identify critical changes to practice and policy that can address barriers in transitions between levels of care. A better understanding of innovative care platforms, such as telehealth services, is a particular area of need that requires dedicated research [19]. Implementation of identified best practices and dissemination of lessons learned can help improve treatment outcomes and quality of life for diverse patient populations.
RESEARCH, DATA, AND METRICS NEEDS

**Priority: Collect and Assess Data on Demographics, Social Determinants of Health, Special Populations, and Outcomes**

- Collect more granular data on opioid-related deaths to elucidate the causes of opioid overdose (e.g. SUDs, pain treatment, recreational use of opioids in children) [11]
- Include information specific to patient sociodemographic factors, such as socio-economic standing, in data related to OUD prevalence and rescue outcomes [19]
- Specifically target capturing data for especially high-risk populations with SUDs (e.g. people of color, rural, incarcerated, homeless, and expectant mothers) to gather insights on barriers to obtaining treatment [11]
  - Potential focus: persisting issues related to accessing treatment and recovery services, disparities and mortality numbers, and other outcomes in the context of the COVID-19 pandemic [32]
- Evaluate the efficacy of prevention, treatment, and recovery strategies in special populations (adolescents, incarcerated populations, etc.) [4,11]
  - Potential focus: strategies that involve patient peers and family members
- Establish data systems to monitor and take steps to prevent a rise in SUDs and overdoses during the COVID-19 pandemic (and afterwards) [32]

**Priority: Review Current Telemedicine Services, Including Access Limitations**

- Conduct studies to address potential bias and limitations of telehealth studies to date
  - Potential focus: studies must consider rural populations - telemedicine may be a potential fruitful intervention for rural communities [19]
- Collect data on barriers to telemedicine access for underserved/marginalized populations [13]
- Evaluate use of telehealth to support the needs of patient populations with SUDs or chronic pain during COVID-19 and beyond [30]
- Further investigate issues of informed consent, guidance, and clarification of uncertainties, best practices, and lessons learned related to telemedicine [7]
Priority: Better Understand Key Challenges in Care Transitions

- Evaluate compliance with and use of care plans when persons with OUD are moving between care settings; map OUD journeys comprehensively, including details about what is happening/not happening during handoffs, and the role of family engagement.
- Implement and evaluate strategies to increase patient engagement and motivation to receive and maintain committed to OUD treatment [15].
- Identify obstacles that exist for hospitals to enable streamlined entry into treatment after rescue [19], including methods used to successfully move patients into treatment, reasons for failure to move patients into treatment, and data stratified by subpopulations.
- Assess barriers across the Screening, Brief Intervention, and Referral to Treatment (SBIRT) continuum. Follow patients throughout treatment to design targeted interventions to increase treatment effectiveness and prevent escalation of substance abuse and overdose deaths.
- Collect data on the most urgent barriers to effective/efficient care transitions and needs of patients with SUDs and of clinicians who treat SUDs during the COVID-19 pandemic.

Priority: Evaluate Policies/Initiatives that may Facilitate Greater Access to Prevention, Treatment, and Recovery Care

- Better understand how specific policies can improve implementation or remove barriers to OUD and pain management care [19].
  - Examples include: suspension rather than termination of Medicaid eligibility when incarcerated, reimbursement for telemedicine or non-pharmacological treatment of pain.
- Evaluate effectiveness of OUD anti-stigma campaigns among clinicians and patients [5].
- Determine the impact of clinical decision support (CDS) on opioid screening and prescribing.
- Assess the benefits and risks of safe syringe programs for those with OUD.
- Simplify and increase usage of prescription drug monitoring programs (PDMPs), measure outcomes and impact of utilizing PDMPs and determine lessons learned for other data sharing tools [15].
- Identify the relationship (or lack thereof) of naloxone availability of over-the-counter and overdose deaths.
Priority: Identify Barriers and Best Practices Relevant to Treatment and Medications for Opioid Use Disorder (MOUD)

- Assess the gap between evidence-based practice and clinical implementation of MOUD [31]
  - Potential focus: optimal strategies for promoting evidence-based opioid prescribing, the role of pharmacies, and evaluations of programs that might expedite access to MOUD
- Investigate federally-funded treatment programs to determine if they follow best practices and provide MOUD
- Evaluate innovative models of treatment delivery that address social determinants of health and racial and geographic disparities in access to care*
- Better understand the barriers federally-funded opioid treatment programs face in providing medical, counseling, vocational, educational, and other assessment and treatment services [15]
- Compare the ease of implementing MOUD under different payment structures, including value-based payment arrangements
- Determine the impact of current state and federal requirements on access to and provision of MOUD
  - Potential focus: X-waiver, education requirements, patient limits, team composition, supervision requirements
- Expand the evidence base around use of integrative therapies regarding opioid reduction in SUD treatment [29]
  - Potential focus: traditional, complementary, and alternative treatments for multimodal care
The National Academy of Medicine’s Action Collaborative on Countering the U.S. Opioid Epidemic is a public-private partnership composed of more than 60 organizations representing federal, state, and local governments; health systems; associations and provider groups; health education and accrediting institutions; pharmacies; payers; industry; nonprofits; and academia. The Action Collaborative is committed to developing, curating, and disseminating multi-sector solutions designed to reduce opioid misuse and improve outcomes for individuals, families, and communities affected by the opioid crisis. The Action Collaborative’s work focuses on four key areas: health professional education and training; pain management guidelines and evidence standards; prevention, treatment, and recovery services; and research, data, and metrics needs. Learn more about the Action Collaborative at: nam.edu/Opioid Collaborative.

ACKNOWLEDGEMENTS

This research agenda, developed on behalf of the Action Collaborative, benefited greatly from the guidance of the Research, Data, and Metrics Needs Working Group, whose members include Carlos Blanco, MD, PhD, National Institute on Drug Abuse; Kelly J. Clark, MD, MBA, American Society of Addiction Medicine; Rebecca Baker, PhD, National Institutes of Health; David Beier, JD, Bay City Capital; Richard Bonnie, LLB, University of Virginia; Kathy Chappell, PhD, RN, FNAP, FAAN, American Nurses Credentialing Center; Humayun “Hank” J. Chaudhry, DO, MS, MACP, Federation of State Medical Boards; Jianguo Cheng, MD, PhD, American Academy of Pain Medicine; Kyle P. Edmonds, MD, FAAHPM, American Academy of Hospice and Palliative Medicine; James Gifford, MD, FACP, Federation of State Medical Boards; Lisa Hines, PharmD, Pharmacy Quality Alliance; Christopher M. Jones, PharmD, MPH, US Centers for Disease Control and Prevention; Kelly King, PhD, MPH, American Institutes of Research; Kevin Larsen, MD, FACP, Optum Labs; Bertha K. Madras, PhD, McLean Hospital and Harvard Medical School; Edward Mariano, MD, MS, American Society of Anesthesiologists; Ray Mitchell, MD, MBA, Liaison Committee on Medical Education; Vincent G. Nelson, MD, MBA, Blue Cross Blue Shield Association; Robert “Chuck” Rich, Jr., MD, FAAFP, American Academy of Family Physicians; Friedhelm Sandbrink, MD, US Department of Veterans Affairs; and Steve Singer, PhD, Accreditation Council for Continuing Medical Education.

Please note this in an excerpt from the full research agenda. The research agenda and complete list of references can be found here: www.nam.edu/opioid-collaborative-agenda

Disclaimer: The views expressed in this research agenda are those of individual experts and not necessarily of the individuals’ organizations, the National Academy of Medicine (NAM), or the National Academies of Sciences, Engineering, and Medicine (the National Academies). This research agenda is intended to help inform and stimulate discussion. It is not a report of the NAM or the National Academies.